

# The Consumer Benefits of an Optional Federal Charter: The Case of Auto Insurance

By

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A key element of most legislative proposals to establish an optional federal charter for insurers is that they would allow market competition rather than government regulation to set insurance rates. Insurers choosing the federal charter, therefore, would be free to set premiums based on their calculations of actuarial risks and other competitive considerations. The market would discipline insurers and, as in other sectors, would keep premiums in line with claims, other expenses, and a reasonable allowance for profit (taking account of the relative risks involved in underwriting particular kinds of insurance).

In fact, this is how insurance rates are generally set today in certain lines of insurance that would be affected by OFC legislation already, notably life insurance and most commercial lines. Although technically rates for these lines of insurance must be filed with state regulators, in practice regulators rarely challenge them, and insurers are free to charge the rates they file without prior regulatory approval.

A notable exception to this general pattern is personal auto insurance, where most states insurance commissions play a major role in dictating the premiums insurers charge, and a few state insurance commissions actively set rates.<sup>2</sup> The fear that unregulated auto insurance rates would lead consumers in some states to pay more for this insurance than

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<sup>2</sup> We concentrate throughout this paper on personal auto insurance – as distinct from commercial auto insurance – since much of the political concern about insurance rates is confined to the personal auto line.

they do now is one of the reasons why some in Congress may be reluctant to include auto insurance, and perhaps personal lines more broadly, in any OFC legislation.

Is there really a basis for this concern? Economists who have studied auto insurance regulation in the past have consistently concluded that rate regulation distorts the market, rewarding higher risk drivers who would pay more without rate controls at the expense of safer drivers who would pay less. The *average* effects – that is, the impact of rate regulation on the average consumer, or on all consumers in a given state – seem more ambiguous: while total insurance costs may be suppressed or reduced by rate regulation in the short run, they may be increased over the longer run. The presence of rate regulation can discourage insurers from lowering premiums when claims costs and expenses are falling. Further, the distortion in the rate structure due to regulation fails to discourage imprudent driving behavior of higher risk drivers. As a result, rate regulation can raise claims costs, and ultimately premiums, over the long run.

Given the strong degree of interest in auto insurance markets and their seeming centrality to the coverage of any OFC legislation that may eventually pass the Congress, we concentrate here on what the evidence suggests would be the most likely impact of enabling federally-chartered auto insurers to charge rates for auto insurance determined by market competition – that is to say, what most likely would happen if Congress eventually approves OFC legislation that would extend to auto insurance. By implication, the conclusions reached here also should apply to homeowners' insurance.<sup>3</sup>

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<sup>3</sup> In what follows, we concentrate solely on rate regulation or deregulation and do not address other forms of regulation – such as solvency of insurers and perhaps some sort of regulation of insurance forms -- that would continue to be appropriate for federally-chartered insurers under an OFC system.

The most statistically valid studies of the impact of rate regulation on average premiums are those which control for other relevant factors that may affect rates. The most recent prior studies of this kind, those reported in a 2002 volume edited by Professor David Cummins and published by the AEI-Brookings Joint Center for Regulatory Studies [Cummins, 2002], establish that the nature and degree of rate regulation has no statistically significant effect on rates over the long run, and indeed, to the extent that rate regulation fails to discourage higher risk drivers from driving more carefully may lead to *higher* rates. We summarize the key findings of the Cummins study in the first part of this paper.

A simpler, though admittedly less rigorous, way to assess the impact of rate regulation on average premiums is simply to compare average premiums, or proxy measures of average premiums, in the relatively few years before and after a change in the regulatory regime: either deregulation or regulation. By limiting the comparison to just a few years on either side of the change in regime, this “before/after” analysis can, to some extent, control for other factors (which are not likely to change significantly over such a relatively short period). In addition, “before/after” comparisons are likely to be better understood by policy makers and voters than more rigorous statistical tests.

We therefore report in the second part of our paper the results from three “before/after” comparisons: two partial deregulatory episodes most recently in South Carolina (1999) and New Jersey (2003), and one episode of the opposite nature, the adoption of a strict prior approval regulatory regime in California (Proposition 103 which became effective in 1989). In addition, we summarize some recent, more rigorous statistical analysis of the link between rate regulation and overall claims losses, and thus

indirectly premiums, in Massachusetts, another state where rates have been tightly regulated.

The data we examine indicate that, on average, consumers were not harmed and very likely benefited in the short run after rates were partially deregulated in both South Carolina and New Jersey. Conversely, despite popular perceptions to the contrary, some key data before and after California adopted Proposition 103 suggest that consumers did not benefit from that law, and indeed may have been harmed.

Finally, the recent statistical analysis of rates in Massachusetts confirms what economic theory would predict: that by distorting the rate structure, rate regulation actually leads to higher loss costs, and thus higher premiums, on average, than would be the case under market competition. Massachusetts may be taking that lesson to heart in recent reforms that introduced somewhat greater flexibility in the setting of insurance rates by market forces. In addition, the substantial decline in the share of market accounted for by residual market plans in New Jersey and South Carolina since each state allowed more room for competition also indicates that partial deregulation in those states has dramatically reduced the distortions in the rate structures in each state that had the effect of subsidizing higher-risk drivers.

The clear implication for federal policy makers who may be considering OFC legislation from all of this evidence is that there is no basis for fearing that market competition in lieu of state rate regulation would harm consumers. This should not be surprising given the structure of the auto insurance market, and indeed other insurance markets, where large numbers of insurers do business and the markets are not concentrated.

### **Rationale for and Impact of Auto Insurance Rate Regulation: Prior Studies**

Most states play a major role in dictating the premiums insurers charge for auto insurance. According to the most recent count we have been able to find, 31 states require rates to be approved before they can become effective.<sup>4</sup> Two states, California and Massachusetts, are widely considered to have the most tightly regulated insurance markets (New Jersey belonged to this group until 2003, as discussed in more detail below). In some other states, insurers do not need prior approval to charge what they believe the market will allow, although regulators can subsequently disapprove a rate. This rarely happens, in large part because insurers are hesitant in these states to implement rates that might trigger subsequent disapproval, and thus they negotiate rates with regulators or wait for them to approve the filed rates. As a result, even in many states that do not require prior approval of rates, market forces are not entirely free to operate.

Why would any state (or any other level of government) regulate the rate or price of any service, such as auto insurance? Economic theory suggests that price or rate regulation can improve consumer welfare if a market is subject to a natural monopoly (because the unique nature of the product or service exhibits large economies of scale such that the market can only support a single competitor), or if the market is highly concentrated with only a few sellers/producers who, because of significant barriers to entry from others, can charge prices above competitive levels. In such circumstances, if rates or prices are set by regulation at or close to average costs, consumers are likely to

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<sup>4</sup> J. David Cummins, "Property-Liability Insurance Price Deregulation: The Last Bastion?" in Cummins (2002), p. 3.

pay less and output of the product or service is likely to be greater than in the absence of regulation.<sup>5</sup>

At the federal level, policy makers over the past several decades (beginning primarily in the Carter Administration and continuing thereafter) have recognized that neither of these conditions – natural monopoly or high seller concentration with entry barriers – held (if they ever did) in a number of services where prices or rates historically had been regulated: airlines, trucking, railroads, telecommunications, and banking. Economists broadly agree that price deregulation in these areas clearly benefited consumers, saving them billions of dollars each year.<sup>6</sup>

Do the economic conditions warranting regulation of rates apply to personal auto insurance? As is true for all other lines of insurance, the auto insurance business is not a natural monopoly. To the contrary, over 1,000 insurers offer the service nationwide. Significant numbers of companies offer auto insurance in any single state. Still, the numbers of insurers doing business and thus the concentration levels in any specific state can depend on the presence and nature of rate regulation. For example, one year after South Carolina partially deregulated its auto insurance rates in 1999 (discussed in more detail below), the number of auto insurers doing business in the state tripled, from 55 the previous year to roughly 150.<sup>7</sup>

What, then, might account for the tight regulation of auto insurance rates in California and Massachusetts? To return to economic theory, is it possible that despite the

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<sup>5</sup> We say “likely” because it is always possible that regulators can make mistakes or succumb to political pressures so that any price or rate ceilings are sub-optimal. Indeed, that is precisely what the evidence suggests has happened in the states that have most tightly regulated auto insurance rates (where, as the text demonstrates, there is no compelling economic rationale for rate regulation in the first place).

<sup>6</sup> See, e.g. Winston (1993).

<sup>7</sup> Martin F. Grace, Robert W. Klein, and Richard D. Phillips, “Auto Insurance Reform: Salvation in South Carolina,” in Cummins (2002), p. 163.

unconcentrated nature of the industry, auto insurers nonetheless take advantage of the antitrust exemption under the McCarran-Ferguson Act to implicitly or even explicitly collude? In that event, state rate regulation could be justified as a way of offsetting any anti-consumer impacts of joint rate-setting by insurers.

That supposition is not supported by the facts. Since the 1970s, rate-setting by insurance rating bureaus has declined substantially in importance. There is no evidence of which we are aware indicating that insurers today collude on premiums, explicitly or implicitly. Indeed, the prevailing academic opinion about McCarran-Ferguson is that it has little or no effect on insurance premiums.<sup>8</sup>

The best explanation for auto insurance rate regulation is that it is a political response to concerns about high and rising auto premiums. These concerns tend to be most pronounced in states where premiums in fact are high and/or rising rapidly, and/or where there is significant variability in premiums within the state across geographical regions and among classes of drivers. Under such circumstances, the highest-risk drivers facing the highest premiums are likely to have the most intense interest in supporting policies and elected officials who promise lower rates, even though rate regulation tends to penalize lower-risk drivers (who most likely are unaware that they end up subsidizing higher-risk groups under rate regulatory regimes).<sup>9</sup> It is no accident, therefore, that auto insurance rates have been most tightly regulated in California and Massachusetts, where auto claims costs have been and still are among the highest in the nation.<sup>10</sup>

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<sup>8</sup> Grace and Klein (2008).

<sup>9</sup> Grace, Klein and Phillips (2002).

<sup>10</sup> Interestingly, until Proposition 103 was enacted in 1989, California had long relied on market forces to determine auto insurance rates. Likewise, Massachusetts had adopted so-called “competitive rating” in the late 1970s, but later abandoned that approach.

The foregoing propositions are extensively documented in what is surely the most thorough, recent study of auto insurance regulation to date. This study was conducted by a team of researchers organized by Professor David Cummins of the University of Pennsylvania's Wharton School of Finance. Cummins, who is one of the most highly regarded academic scholars of insurance, convened a distinguished group of scholars to examine the effects of the regulation of auto insurance rates in a number of states: those where rates have been tightly regulated (California, Massachusetts, and at the time, New Jersey), one state where regulation as of that time had become less intrusive (South Carolina), and one state where rates had long been deregulated (Illinois). The results were published in 2002 by the AEI-Brookings Joint Center for Regulatory Studies.<sup>11</sup>

The researchers in the Cummins project focused primarily on personal auto insurance because, as indicated, there are more states in which insurance rates for this coverage are tightly regulated than for any other type of insurance (except for workers' compensation).<sup>12</sup> This made it possible to compare the performance of insurance markets in states where rates were more tightly regulated than in states where this was not the case. In addition, two of the authors were able to conduct "before/after" comparisons: what happened in California after it adopted Proposition 103 regulating rates much more tightly, and the limited experience in South Carolina, which partially deregulated auto insurance rates in 1999. Because one state (South Carolina) had moved in a deregulatory

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<sup>11</sup> Litan was one of the founding co-directors of the Joint Center, along with Robert Hahn, and asked Professor Cummins to lead this project. In late 2007, the Joint Center was dissolved. Its activities continued to be carried out, under the leadership of Robert Hahn, under the auspices of the Regulatory and Markets Center at AEI. Litan serves as co-chairman of the advisory board of that Center.

<sup>12</sup> As Cummins notes in the introduction, a study issued several years before the AEI-Brookings Joint Center study found the perversities of rate regulation in the market for workers' compensation to be similar to those found where auto insurance rates were tightly regulated. See Danzon and Harrington (1997). Two chapters in the Cummins book addressed property-liability insurance market more broadly, both in the United States and elsewhere around the world. However, most of the chapters focused on the automobile insurance market, which is also the focus here.

direction, researchers also could conduct a limited “before-after” comparison in to determine the impact of the change in regulatory policy in that state.

The Cummins study reached many findings. For purposes of brevity, we highlight the most pertinent ones here.

First, the study contained two statistical analyses that came to the same conclusion. In his statistical cross-section analysis of auto insurance rates in 50 states over the 1972-98 period, Scott Harrington found that, on average, prior approval regulation has had little or no effect over time on average rate levels for any given level of claims costs.<sup>13</sup> Similarly, Stephen D’Arcy reported from regressions estimated over the 1980-98 period that the presence or type of regulation in different states for 14 different auto insurers had no statistically significant effect on the ratios of their incurred losses to total premiums (a proxy for premium levels). In conjunction with the state case studies, the two statistical analyses imply that *deregulation* of rates should not raise average premiums for consumers in the long run.<sup>14</sup>

Second, notwithstanding the absence of long run impacts on *average* rates, various authors on the Cummins team discuss how rate regulation distorts *rate structures*, causing low-risk drivers to pay more than is actuarially justified in order to subsidize higher-risk drivers. As we discuss in more detail below, this distortion reduces incentives for higher-risk drivers to behave more carefully, which should raise total claims losses.

One author team (Dwight Jaffee and Thomas Russell) suggests that this adverse effect

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<sup>13</sup> Harrington did not examine the question, discussed next, whether regulation might increase total claims costs by failing to encourage more careful driving.

<sup>14</sup> It is possible, of course, that rate regulation may suppress rates in the short run, but insurers operating under some form of prior approval regulation appear to have been able to compensate for this effect by not fully passing along declining costs in lower premiums for fear that they will be unable to raise premiums when costs increase.

could be offset, at least partially, by rating plans that take account of drivers' experiences (violations and accidents).

Third, the presence or absence of rate regulation clearly had an effect on the number and fraction of a state's drivers who can only obtain insurance in a state's residual markets facility (an insurance pool of last resort for those high-risk drivers who cannot buy insurance on the open, voluntary market because insurers are not willing to sell them policies at the regulated rates). The findings of several of the case studies, together with Harrington's statistical analysis, confirmed that regulation did indeed compel more drivers to obtain their insurance through residual markets facilities.

Finally, Harrington found that because of its short-run impacts on insurer pricing behavior, rate regulation increases volatility in both insurance premiums and in insurer cash flow. This increase in cash flow volatility in turn raises the cost of capital for insurers, which is likely to translate into higher rates over the long run.

### **Additional "Before-After" Comparisons**

Much of the analysis in the Cummins studies rested on the application of standard statistical techniques: regression analysis to control for various factors that can determine insurance rates (or a proxy, such as the ratio of incurred losses to premiums), in order to isolate the effect, if any, of rate regulation on rates over time. A less rigorous, though more transparent, way to assess this impact is to compare rates (or proxy variables) before and after any change in a regulatory regime. By keeping the "before/after" period relatively short, and comparing rates in a particular state to some benchmark like the national average, it may be possible to generate results that are the functional equivalent of a regression analysis. In effect, this is what is done by researchers who conduct "event

studies” by looking at how certain events affect stock prices: limiting the time period before and after “the event”, and comparing the impact on the price of a particular stock to the changes in stock prices over the same periods for the market as a whole.

Here, we look more closely at several such “natural experiments” in auto insurance rate regulation. Two of them relate to deregulatory measures: measures allowing greater (but not complete) pricing flexibility by insurers doing business in South Carolina beginning in 1999,<sup>15</sup> and by insurers operating in New Jersey effective in 2003. In each case, we will look at what happened to average premiums before and after these events and compare the changes to those observed over the same time periods for the nation as a whole. Admittedly, this analysis by its very nature will only shed light on the short run impact of deregulation, which distinguishes it from the longer-run statistical analysis conducted by Harrington as part of the Cummins study. Nonetheless, the shorter run effects are not only interesting in their own right, but may be especially salient to federal elected officials weighing the effects of preempting state rate regulation through OFC legislation.

We also are aware that different consumers would have fared differently in each state after deregulation. Indeed, we believe we can safely assume that any moves toward deregulation have benefited low-risk drivers in particular, since rate regulation historically has required them to subsidize high-risk drivers. Perhaps an equally important question for federal policy makers considering OFC legislation, however, is whether consumers, *considered as a group*, have been harmed from rate deregulation in the states

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<sup>15</sup> Effective in March 1999, South Carolina introduced a “flex rating” system that dispensed with prior approval of rate changes plus or minus 7 percent, and that permitted insurers much greater freedom to match rates with the risk profiles of drivers. In addition, the state began to phase out certain unusual features of its residual markets facility, including subsidies, which had led to both rapid growth and cost escalation in the immediately preceding years.

that have tried it. That is why we focus here on the impacts of regime change on the average premiums (or proxies for that measure).

To be sure, the simple comparisons of average premiums cannot control for changes in the average level or type of coverage bought by consumers. For example, a decline in insurance rates might prompt some consumers to purchase “more insurance,” such as policies with lower deductibles or higher policy limits. The opposite would be expected if rates were to increase. The average premium figures cannot capture such effects, but supposing they exist, they reinforce the conclusions reached simply by looking at the change in average premiums. Thus, if the average coverage level increases after rates fall, then the “effective price” of insurance is even lower than the average premium may imply.

We also revisit some relevant data before and after California adopted Proposition 103, which ostensibly made California’s regulatory regime one of the strictest in the country. This episode was studied extensively by Jaffee and Russell in the Cummins study, with the authors finding then that apparently none of the negative effects generally associated with rate regulation – that firms exit the market, that the state’s assigned risk pool would expand, and that the regulated industry would earn lower profits – actually materialized. Still, it seems to be conventional wisdom that California’s system of rate regulation – which froze premiums for five years -- benefited California’s auto insurance consumers. But to us, the more relevant question, which cannot simply be answered by simply looking at premiums before and after Proposition 103 went into effect in 1989, is what would have happened to California’s consumers had rates *not* been regulated? That is, based on data prior to that event, what can one infer about the level of market-

determined rates? Is it possible that California's consumers might have been *better off* had rates there never been frozen and then subject to strict prior approval thereafter? We examine this question, too.

### **The Experiments in Rate Deregulation**

The first experiment we look at is South Carolina's partial deregulation in 1999. The authors of the chapter dealing with that state in the Cummins study (Grace, Klein and Phillips) identified some preliminary salutary effects of that change, but can anything else be said?

Again, for reasons already explained, it is only appropriate in "event studies" that make "before/after" comparisons to limit the period on either side of the regulatory regime as a way of effectively controlling for other factors that may influence rates. Accordingly, Table 1 compares average premiums in South Carolina versus those for the nation as a whole in the two years preceding the change in policy, in 1999, and in the two subsequent years. Notably, average premiums in South Carolina in the year prior to the reform increased by 4.2 percent, compared to a decline nationwide of 0.4 percent. Following the reform of 1999, this pattern was reversed: South Carolina premiums declined by almost 6 percent versus a nationwide increase of 2.1 percent. Premiums declined most substantially in South Carolina in the year of the reform itself, 1999, or by 9.5 percent, a much steeper decline than the 2.8 percentage point drop in nationwide premiums.

Table 1

Average Auto Insurance Premiums (Dollars): South Carolina vs. U.S.

	<u>South Carolina</u>	<u>United States</u>
1997	629.1	705.3
1998	655.3	702.7
After partial deregulation:		
1999	593.3	683.4
2000	619.6	686.3
2001	616.9	717.7
<b>Percent Changes:</b>		
1997-98	4.2	-0.4
After partial deregulation:		
1998-99	-9.5	-2.8
1998-2001	-5.9	2.1

Source: NAIC (2003)

Table 2 reports similar data for New Jersey, after it partially deregulated auto insurance premiums in 2003. As in South Carolina, premiums increased at a faster pace in the year before deregulation, 2001-02, than nationwide. New Jersey premiums rose at a slightly faster pace than the national average after deregulation in the first two years, but by the third year, or 2005, this pattern was reversed. Indeed, one prominent media report indicated that by 2005, deregulation was having revolutionary impacts in the state: 75 percent of the state's customers, including those with poor driving records, were paying less for auto insurance than when rates were regulated, and that further reductions were expected. Savings of as much as 30-40 percent were common for many customers.<sup>16</sup>

It is also instructive to examine what happened to the percentage of the auto insurance market accounted for by "residual market" plans in each of the two states after the deregulatory measures. As noted, residual market plans are "last resort" insurance facilities for individuals who cannot purchase insurance in the "voluntary market." In a competitive market, insurers will charge rates that reflect the risks posed by different drivers. In regulated settings, rates for higher-risk drivers tend to be capped, which leaves them no choice but to purchase insurance in the residual market. The share of the market accounted for by residual market plans, therefore, is one indicator of the extent to which rate regulation distorts the rate structure.

In fact, participation in residual market plans has dropped sharply in both New Jersey and South Carolina since each state has allowed more rate flexibility. For example, in 1998, over \$468 million in written premiums were collected by the residual market plan in South Carolina, which accounted for 26 percent of all auto insurance premiums in

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<sup>16</sup> Treaster (2006).

the state in that year, the highest percentage in the nation. The following year, in 1999, that share dropped to 8.6 percent. By 2006, South Carolina's residual market premiums had fallen below \$1 million, and accounted for less than 0.1 percent of the state's auto insurance market. Likewise, in 2002, New Jersey's residual markets plan collected \$423 million in premiums, representing 6.2 percent of all auto insurance premiums. By 2006, the residual market share in the state had declined to 2.9 percent.<sup>17</sup> Clearly, the deregulatory steps in both New Jersey and South Carolina have reduced the distortions in rates that had previously caused large numbers of auto consumers to seek refuge in residual market plans. This is important because, as discussed further below, the evidence suggests that rate distortions can lead to higher overall claims losses and thus higher insurance premiums.

In sum, the evidence from both the South Carolina and New Jersey experiences with partial deregulation indicates that consumers in each state were not harmed, and could well have benefited from this change in the regulatory regime.

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<sup>17</sup> The data in this paragraph are from *AIPSO Facts* for various years.

Table 2

## Average Auto Insurance Premiums (Dollars): New Jersey vs. U.S.

	<u>New Jersey</u>	<u>United States</u>
2001	1027.7	725.6 <sup>18</sup>
2002	1125.2	780.8
After partial deregulation:		
2003	1193.2	824.5
2004	1221.1	840.0
2005	1183.5	829.2
<b>Percent Change:</b>		
2001-02	9.5	7.6
After partial deregulation:		
2002-03	6.0	5.6
2002-04	8.5	7.6
2002-05	5.2	6.2

Source: NAIC (2007)

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<sup>18</sup> The 2001 number for the national average differs from the 2001 figure reported in the previous table because the data in this table are from a subsequent NAIC publication (2007).

### **Revisiting California's Proposition 103: Did Consumers Really Benefit?**

After climbing rapidly in the years preceding passage of Proposition 103, California auto insurance premiums essentially were flat in the following decade, when in contrast, premiums nationwide continued to increase (Jaffee and Russell, 2002). This result follows directly from the law itself, which froze most insurance premiums from late 1989 through 1994, and required all rate increases *and decreases* to be approved by the insurance commissioner before they could take effect. In addition, the proposition required a 20 percent rollback, or rebate, of insurance rates, as of late 1987.

But none of this means that Proposition 103 actually benefited consumers. To know if that was or was not the case requires knowledge or at least an estimate of what rates would have been had competition been allowed to continue to set premiums. It is entirely possible that under a tougher prior approval regime, if insurer costs had been falling, the regulatory system may have inhibited insurers from lowering rates through normal forces of competition. If this occurred, then the proposition would have *harmed* consumers.

How can this hypothesis be tested? One way is to compare what happened to the average loss ratio and to other measures of insurer profitability in the state before and after Proposition 103. The loss ratio – which is calculated by the ratio of total claims losses incurred to premiums collected in a given year -- can be viewed roughly as the inverse of an insurer's markup (think of the inverse of the loss ratio as being premiums divided by losses, which looks like a markup measure). It is a rough indicator, because in fact, claims losses in any year are backward looking. In a market setting, insurers will set premiums by projecting what their *future* losses are likely to be. Nonetheless, the loss

ratio for a given year is likely to affect projected future premiums. It also can be viewed as a measure of the competitive intensity in a state, or in the event of regulation, what kind of markup regulators are willing to approve. The average underwriting profit in any given year and the return on net worth also serve as other measures of competitive intensity.

Other things being equal, if auto claims losses fell after Proposition 103, as in fact happened, then the shift toward tighter regulation would have resulted in lower premiums *than otherwise would have been the case* only if the loss ratio increased or measures of insurer profitability declined. If the opposite occurred – that is, if the loss ratio declined (meaning more premiums collected for any given dollar of losses incurred) or insurer profitability increased – this would suggest that consumers would have been better off if the normal forces of competition had been allowed to operate.

Table 3 provides the loss ratios and profit measures before and after Proposition 103. We include a number of years following 1989, the year in which the proposition first became law, because the proposition did not become fully effective until 1995 (due to delays resulting from litigation and further regulatory refinement of the proposition).

The numbers in Table 3 tell a compelling story: whether by loss ratios (the inverse), underwriting profit, or return on net worth, insurers did far better after Proposition 103 was adopted and gradually implemented than in the immediately preceding years. The increase in insurer profitability occurred despite a flattening of insurance premiums themselves. How did this happen?

Jaffee and Russell discuss this issue extensively in their chapter of the Cummins study and report the obvious answer: that incurred losses per insured vehicle in California

fell substantially after Proposition 103 was implemented. By far the most important reason for the drop in losses was the decline in collisions with fatalities and injuries due to greater seat belt usage in the state. In addition, Jaffee and Russell find that the California Supreme Court's ruling in *Moradi-Shalal v. Fireman's Fund*, which significantly limited the exposure of insurers to bad faith claims arising out of third party injury claims, also led to lower losses. Both of these factors clearly had nothing to do with Proposition 103. Jaffee and Russell suggest that two other factors, linked to the change in regulation, might have contributed to the decline in losses although they do not quantify the impacts: the mandated "good driver" discount, which should have encouraged safer driving, and the incentives the premium freeze should have given insurers to reduce fraud and other expenses. At the same time, however, by requiring the prior approval of rate changes, the proposition may also have discouraged insurers from filing rate decreases in a timely fashion, thus increasing profit margins.

The bottom line from California's experience with rate regulation is that it is not appropriate to infer that tighter regulation of insurance rates "worked" – in the sense that it benefited California consumers – just because premiums remained essentially flat after Proposition 103 went into effect. Had loss ratios stayed at levels comparable to those prior to 1989 when rates were more market-determined, given the decline in incurred losses for the reasons already noted, it is likely that auto insurance premiums in California would have been lower had Proposition 103 never been enacted.

Table 3

## Auto Insurance Loss Ratios and Profitability Measures in California

	<u>Loss Ratio</u>	<u>Underwriting Profit (%)</u>	<u>Return on Net Worth (%)</u>
1985	75.4	N/A	3.0
1986	75.4	-10.7	5.6
1987	76.1	-12.2	2.6
1988	74.0	-9.4	4.5
Post-regulation:			
1989	69.7	-4.8	9.6
1990	69.7	-5.4	9.0
1991	62.4	1.9	16.5
1992	60.3	6.5	21.2
1993	61.7	5.0	18.4
1994	62.5	5.9	16.7
1995	60.4	8.0	18.7
1996	58.2	9.7	19.3
1997	53.6	11.2	18.9
1998	57.0	3.9	12.4

Source: NAIC

A natural question one might ask is what would a similar before/after analysis of loss ratios and underwriting profits, as opposed to premiums, in New Jersey and South Carolina look like? Might it be the case that premiums would have fallen even further or increased less rapidly in each state had each state continued to regulate rates? The data shown in Table 4 are mixed, but on the whole, in our view, do not undermine the previous conclusion that, at the very least, deregulation did not harm consumers in each state and conceivably could have benefited them.

In particular, for New Jersey, it is true that the loss ratio fell modestly in 2003-05, as compared to 2001-2002 (although by 2005, the loss ratio had climbed back to close to the 2002 level), and that likewise underwriting profits post deregulation were positive, rather than negative than in the two years prior to deregulation. Nonetheless, profitability for auto insurers was already improving rapidly in the year before deregulation (whether measured by the loss ratio or underwriting profits), or perhaps more precisely, was being allowed to improve by the regulators. Furthermore, in the year 2006, by which time partial deregulation had been in effect for some time, underwriting profits for insurers had fallen below zero again (0.3 percent), according to the NAIC data. Broadly considered, these trends do not clearly establish that continued regulation would have kept average auto insurance premiums in New Jersey lower than they were when they were partially deregulated. This is especially true in light of the earlier press report indicating that many New Jersey customers were saving substantial sums on their auto insurance premiums following the change in the regulatory regime.

Table 4

## Loss Ratios and Underwriting Profit

Before/After Partial Deregulation in New Jersey/South Carolina

	<u>Loss Ratio</u>	<u>Underwriting Profit (Percent)</u>
<u>New Jersey</u>		
2001	71.5	-9.1
2002	61.8	-1.0
2003	57.9	4.3
2004	57.2	4.7
2005	60.2	2.5
<u>South Carolina</u>		
1997	79.1	-17.8
1998	75.7	-15.4
1999	75.4	-13.5
2000	77.7	-18.8
2001	69.5	-5.7

Source: NAIC

As for South Carolina, Table 4 shows no clear drop in the loss ratio or rise in underwriting profits in the two years immediately after the partial deregulation in that state, although by 2001 there is a marked rise in insurer profitability. Taken together, these data do not point to a clear conclusion either way about what average premiums might have been in South Carolina had its strict regulatory system remained in place. The premium data themselves, however, are quite clear: South Carolina consumers fared better than consumers nationwide in the years immediately following partial deregulation in the state.

### **Rate Regulation and Claims Losses**

One of the consistent findings of prior research, including the study by the Cummins team, is that whatever the average of impact rate regulation may be, such regulation tends to distort rates so that low-risk drivers subsidize higher-risk drivers. Because individuals respond to economic incentives to at least some degree, in principle, higher-risk drivers in the most tightly regulated states therefore should drive less carefully relative to drivers of similar characteristics in the deregulated states where higher-risk drivers face rates that are much more aligned with their accident risk propensities. In fact, several earlier studies have found that, once other factors are controlled for, rate regulation indeed does elevate losses. This is the case both for workers' compensation,<sup>19</sup> and for auto insurance.<sup>20</sup>

The most recent study of this issue relates to the auto insurance market in Massachusetts, which perhaps until recently, has been among the most tightly regulated

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<sup>19</sup> See, e.g., Danzon and Harrington (2000); Harrington and Danzon (2001); Barkume and Roser (2001).

<sup>20</sup> See, e.g., Tennyson, Weiss and Regan (2002) and Weiss, Regan and Tennyson (2005).

in the country. The authors of the study, Richard Derrig and Sharon Tennyson (2008) examine the regulation-loss linkage issue using two approaches. Both approaches clearly support the notion that regulation has increased total losses incurred.

First, Derrig and Tennyson compare auto insurance loss costs in Massachusetts to those in other states over the 1972-95 period, controlling for differences in regulatory environment, traffic density, per capita income, the statewide average cost per day of staying in a hospital, and the amount of insurance coverage purchased. Using standard regression analysis techniques, the authors estimate that auto insurance losses were 44 percent higher than what one would have expected based on the state's demographic composition and its liability coverage.

Second, Derrig and Tennyson examine claims costs in different towns within Massachusetts, some of which benefitted from subsidies in the state's average rating system and others which did not, over "accident years" 1993-2004. Again, using standard statistical techniques, the authors find that auto insurance losses grew faster in towns that received subsidies. This, finding, too is consistent with the hypothesis that rating regimes that have the effect of subsidizing higher-risk drivers on balance entail higher claims costs, and thus higher overall premiums, than rates that are aligned with risk.

If the first result reached by Derrig and Tennyson, namely that rate regulation can lead to higher claims costs of as much as 44 percent, is anywhere near accurate, it suggests that average premiums in Massachusetts are most likely inflated by a similar amount. This makes it conceivable that even many high-risk drivers in Massachusetts who would have to pay higher rates under a more market-determined rating system than low-risk drivers may still pay less than they do currently, because rating freedom would

substantially reduce the overall average or base premium to which any positive risk adjustment might be added. Perhaps we will soon know, since in 2007, Massachusetts began a process of modest reform of auto insurance that allows insurers greater freedom in setting rates.

### **Conclusion**

The prior academic literature on the effect of auto insurance rate regulation makes it very clear that over the long run rate regulation does not benefit consumers. To the contrary, studies indicate that because such regulation can distort rates and thus incentives for prudent driving, rate regulation can lead to even greater losses and thus higher premiums, on average. The Massachusetts experience, in particular, lends support to this conclusion.

Much of the prior literature appropriately controls for non-regulatory factors in seeking to determine the impact of rate regulation. We use a different technique here to control for these other factors, borrowing from the “event study” literature. Specifically, we look to what happened to average auto insurance premiums in two states which partially deregulated rates: South Carolina and New Jersey. In each case we see that rates actually declined or did not increase as fast as the national average. This result supports the inference that, at the very least, consumers were not harmed by rate deregulation, and could well have benefited from the change.

The California experience with Proposition 103 also indicates that it would be wrong to assume that consumers benefit from stricter rate regulation simply by looking at what happens to average rates. Because losses declined in that state after Proposition 103 went into effect, rates should also have declined (totally apart from the mandated rollback

or rebate). The higher insurer profit margins that developed after the shift toward tighter regulation indicate that intensified prior approval of rates can have the counter-productive effect of discouraging insurers from reducing rates to match declining costs. This result is much less likely to occur when markets and competition govern rates, not regulators.

Broadly considered, the evidence reviewed here should provide comfort to legislators considering the federal OFC legislation. Allowing market forces to determine insurance rates charged by federally chartered insurers would be in consumers' best interests.

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